

☐ 27. Document ID: US 5637308 A

L8: Entry 27 of 52

File: USPT

Jun 10, 1997

US-PAT-NO: 5637308

DOCUMENT-IDENTIFIER: US 5637308 A

TITLE: Tabletized ionene polymers

DATE-ISSUED: June 10, 1997

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Del Corral; Fernando	Memphis	TN		
Jaquess; Percy A.	Tigrett	TN		
Fues; Russel E.	Memphis	TN		
Puckett; Wallace E.	Memphis	TN		

US-CL-CURRENT: 424/409; 424/78.1

## ABSTRACT:

Tabletized ionene polymers, methods for their preparation and their use in water treatment is described. The tablet contains about 5 to about 60 percent by weight of an ionene polymer, about 40 to about 95 percent by weight of a salt carrier matrix, 0 to about 10 percent by weight of a disintegration rate regulator, and 0 to about 10 percent by weight of an anticaking agent. The tablets may be made by mixing an aqueous solution of an ionene polymer with a carrier matrix to form a moist mass, drying the moist mass to form granules, reducing the granule size to form a powder, and compressing the powder into a tablet. The tablets are useful in a wide variety of water treatment applications. Accordingly, the specification describes a method for controlling the growth of microorganisms in an aqueous system. Using the method, one treats an aqueous system with an ionene polymer in an amount effective to control the growth of at least one microorganism. The ionene polymer is contained in a tablet of the invention.

24 Claims, 2 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 2

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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RMIC	Draw Desc	Image
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☐ 28. Document ID: US 5630884 A

L8: Entry 28 of 52

File: USPT

May 20, 1997

US-PAT-NO: 5630884

DOCUMENT-IDENTIFIER: US 5630884 A

TITLE: Methods for contact lens cleaning

DATE-ISSUED: May 20, 1997

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Huth; Stanley W.	Newport Beach	CA		

US-CL-CURRENT: 134/27; 134/901, 435/184, 514/839

## ABSTRACT:

Enzyme compositions and methods employing enzyme compositions are disclosed which are useful for cleaning contact lenses. In one embodiment, a composition in accordance with the present invention comprises an enzyme component effective when released in a liquid medium to remove debris from a contact lens located in the liquid medium; and an activity regulating component effective when released in the liquid medium to deactivate the enzyme component located in the liquid medium. This composition is preferably structured so that the enzyme component is released in the liquid medium before the activity regulating component is so released. The period of time between the release of the enzyme component and the activity regulating component is sufficient to allow the enzyme component to effectively remove debris from a contact lens which is introduced into the liquid medium before or at the same time the enzyme component is released in the liquid medium.

16 Claims, 0 Drawing figures

Exemplary Claim Number: 1

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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☐ 29. Document ID: US 5575993 A

L8: Entry 29 of 52

File: USPT

Nov 19, 1996

US-PAT-NO: 5575993

DOCUMENT-IDENTIFIER: US 5575993 A

**\*\* See image for Certificate of Correction \*\***TITLE: Ionene polymers containing biologically-active anions

DATE-ISSUED: November 19, 1996

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Ward; James A.	Eads	TN		
Del Corral; Fernando	Memphis	TN		

US-CL-CURRENT: 424/78.1; 252/301.35, 252/405, 422/154, 422/155, 422/156, 422/158, 422/159, 422/16, 422/160, 422/6, 422/7, 424/405, 424/78.13, 424/78.14, 424/78.15, 424/78.3, 424/78.37, 424/78.38, 43/132.1, 504/345, 510/131, 510/234, 510/382, 510/383, 510/384, 510/391, 510/475, 514/252.11, 514/316, 514/332, 514/352, 514/357, 514/396, 514/399, 514/400, 514/406, 514/408, 514/422, 514/424, 514/425, 514/426, 514/428, 514/588, 514/595, 514/596, 514/597, 514/598, 514/642, 514/643, 71/27, 71/30

## ABSTRACT:

Ionene polymers having biologically-active organic and/or inorganic anions are described. Methods to prepare the ionene polymers, compositions containing them and their methods of use are also described.

71 Claims, 2 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 2

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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NAME	Draw Desc	Image
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☐ 30. Document ID: US 5529700 A

L8: Entry 30 of 52

File: USPT

Jun 25, 1996

US-PAT-NO: 5529700

DOCUMENT-IDENTIFIER: US 5529700 A

**\*\* See image for Certificate of Correction \*\***

TITLE: Algicidal or algistatic compositions containing quaternary ammonium polymers

DATE-ISSUED: June 25, 1996

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Kierzkowski; David J.	Milwaukee	WI		
Kuske; Pamela A.	West Bend	WI		

US-CL-CURRENT: 210/755; 210/764, 252/175, 252/180, 422/37, 504/150, 504/155, 504/158, 504/159, 504/161

ABSTRACT:

A composition comprising a water-dispersible ionene polymer and a water-dispersible di-lower-alkyl ammonium halide polymer (for example, a polymer of dimethyl diallyl ammonium chloride) is disclosed. These polymers are present in the composition in a ratio effective to function synergistically as an algistatic or algicidal agent when an effective amount of the composition is dispersed in a body of water. Examples of suitable bodies of water are swimming pools, spas, lakes, rivers, or water in an industrial water system, such as a cooling water system. Also, a method of treating water which is susceptible to the growth of algae is disclosed. The method is carried out by incorporating in the water an at least algistatic amount of the composition.

27 Claims, 0 Drawing figures

Exemplary Claim Number: 1

Full Title Caption Front Back Summary Description Date Reference Sequence Attachments

Title 2 Draw Data Image

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Term	Documents
TREATMENT	1395019
TREATMENTS	147380
(7 AND TREATMENT).USPT,PGPB,JPAB,EPAB,DWPI.	52
(L7 AND TREATMENT).USPT,PGPB,JPAB,EPAB,DWPI.	52

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**Search Results - Record(s) 31 through 52 of 52 returned.**☐ 31. Document ID: US 5451398 A

L8: Entry 31 of 52

File: USPT

Sep 19, 1995

US-PAT-NO: 5451398

DOCUMENT-IDENTIFIER: US 5451398 A

**\*\* See image for Certificate of Correction \*\***

TITLE: Ophthalmic and disinfecting compositions and methods for preserving and using same

DATE-ISSUED: September 19, 1995

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Vigh; Joseph E.	Placentia	CA		

US-CL-CURRENT: 424/78.04; 514/367, 514/642, 514/912

## ABSTRACT:

Ophthalmic compositions, such as those used to care for contact lenses, methods of preserving such compositions, and methods for disinfecting contact lenses using certain of such compositions are disclosed. The compositions may comprise an ophthalmically acceptable, liquid aqueous medium and, included therein, an effective preserving or disinfecting amount of a combination of certain oxygen-containing ionene polymers and one or more antimicrobial thiocyno components.

22 Claims, 0 Drawing figures

Exemplary Claim Number: 1

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	RMIC	Draw Desc	Image
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☐ 32. Document ID: US 5419897 A

L8: Entry 32 of 52

File: USPT

May 30, 1995

US-PAT-NO: 5419897

DOCUMENT-IDENTIFIER: US 5419897 A

**\*\* See image for Certificate of Correction \*\***TITLE: Ionene polymers as anthelmintics in animals

DATE-ISSUED: May 30, 1995

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Drake; Kevin D.	Memphis	TN		
Puckett; Wallace E.	Bartlett	TN		

US-CL-CURRENT: 424/78.1; 424/438

## ABSTRACT:

The use of ionene polymers as anthelmintics is described. A composition for the treatment of helminth infections in an animal comprising an effective amount of at least one ionene polymer and a physiologically acceptable carrier other than water is disclosed. Also disclosed is a method for the treatment of a helminth infection in an animal.

60 Claims, 0 Drawing figures  
Exemplary Claim Number: 1

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	RMC	Draw Desc	Image
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☐ 33. Document ID: US 5401881 A

L8: Entry 33 of 52

File: USPT

Mar 28, 1995

US-PAT-NO: 5401881

DOCUMENT-IDENTIFIER: US 5401881 A

**\*\* See image for Certificate of Correction \*\***

TITLE: Sulfur-containing quaternary ammonium ionene polymers and their use as microbicides

DATE-ISSUED: March 28, 1995

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Puckett; Wallace E.	Memphis	TN		
Zollinger; Mark L.	Memphis	TN		
Corral; Fernando D.	Memphis	TN		

US-CL-CURRENT: 564/295; 504/100, 504/160, 564/292

## ABSTRACT:

Sulfur-containing quaternary ammonium ionene polymers which are useful as microbicides for controlling the growth of microorganisms in aqueous systems and on surfaces, as well as for inhibiting slime formation in aqueous systems and biocidal compositions containing effective amounts of the sulfur-containing quaternary ammonium ionene polymers.

16 Claims, 0 Drawing figures  
Exemplary Claim Number: 1

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	RMC	Draw Desc	Image
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☐ 34. Document ID: US 5387717 A

L8: Entry 34 of 52

File: USPT

Feb 7, 1995

US-PAT-NO: 5387717

DOCUMENT-IDENTIFIER: US 5387717 A

TITLE: Method for the detoxification of mustard gas, sulfur-containing quaternary

ammonium ionene polymers and their use as microbicides

DATE-ISSUED: February 7, 1995

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Puckett; Wallace E.	Memphis	TN		
Zollinger; Mark L.	Memphis	TN		
Corral; Fernando D.	Memphis	TN		

US-CL-CURRENT: 564/295; 504/100, 504/160, 564/292, 564/296, 588/200, 588/206

ABSTRACT:

A method for the detoxification of a mustard gas by reaction with a bis-tertiary diamine resulting in quaternary ammonium ionene polymers. Sulfur-containing quaternary ammonium ionene polymers which are useful as microbicides for controlling the growth of microorganisms in aqueous systems and on surfaces, as well as for inhibiting slime formation in aqueous systems and biocidal compositions contain effective amounts of the sulfur-containing quaternary ammonium ionene polymers.

12 Claims, 0 Drawing figures

Exemplary Claim Number: 1

Full Title Citation Front Review Classification Date Reference Sequences Attachments

IMC Draw Desc Image

☐ 35. Document ID: US 5277901 A

L8: Entry 35 of 52

File: USPT

Jan 11, 1994

US-PAT-NO: 5277901

DOCUMENT-IDENTIFIER: US 5277901 A

TITLE: Ophthalmic compositions and methods for preserving and using same

DATE-ISSUED: January 11, 1994

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Vigh; Joseph E.	Placentia	CA		
Lo; Priscilla	Carlsbad	CA		
Dziabo; Anthony J.	Lake Forest	CA		
Wong; Michelle P.	Tustin	CA		

US-CL-CURRENT: 424/78.04; 424/78.07, 514/396, 514/642, 514/912

ABSTRACT:

Ophthalmic compositions, such as those used to care for contact lenses, methods of preserving such compositions, and methods for disinfecting contact lenses using certain of such compositions are disclosed. The compositions may comprise an ophthalmically acceptable, liquid aqueous medium and, included therein, an effective preserving or disinfecting amount of a combination of certain oxygen-containing ionene polymers and other antimicrobial agents, preferably certain urea components.

22 Claims, 0 Drawing figures

Exemplary Claim Number: 1

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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☐ 36. Document ID: US 5171526 A

L8: Entry 36 of 52

File: USPT

Dec 15, 1992

US-PAT-NO: 5171526

DOCUMENT-IDENTIFIER: US 5171526 A

**\*\* See image for Certificate of Correction \*\***

TITLE: Ophthalmic compositions and methods for preserving and using same

DATE-ISSUED: December 15, 1992

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Wong; Michelle P.	Tustin	CA		
Dziabo; Anthony	El Toro	CA		

US-CL-CURRENT: 422/28; 424/78.04, 514/642, 514/840

## ABSTRACT:

Ophthalmic compositions, such as those used to care for contact lenses, methods of preserving such compositions, and methods for disinfecting contact lenses using such compositions are disclosed. The compositions may comprise an ophthalmically acceptable, liquid aqueous medium and, included therein, an effective preserving or disinfecting amount of an ophthalmically acceptable quaternary ammonium substituted matrix material, the matrix material being selected from the group consisting of proteinaceous materials, carbohydrate materials and mixtures thereof.

66 Claims, 0 Drawing figures

Exemplary Claim Number: 1

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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WMC	Draw Desc	Image
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☐ 37. Document ID: US 5145643 A

L8: Entry 37 of 52

File: USPT

Sep 8, 1992

US-PAT-NO: 5145643

DOCUMENT-IDENTIFIER: US 5145643 A

**\*\* See image for Certificate of Correction \*\***

TITLE: Nonoxidative ophthalmic compositions and methods for preserving and using same

DATE-ISSUED: September 8, 1992

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Dziabo; Anthony J.	El Toro	CA		
Wong; Michelle P.	Tustin	CA		
Gyulai; Peter	Santa Ana	CA		

US-CL-CURRENT: 422/28; 422/37, 424/78.07, 424/94.4, 514/642, 514/840

## ABSTRACT:

Ophthalmic compositions, such as those used to care for contact lenses, methods of preserving such compositions, and methods for disinfecting contact lenses using such compositions are disclosed. The compositions may comprise an ophthalmically acceptable, liquid aqueous medium and, included therein, an effective preserving or disinfecting amount of certain oxygen-containing ionene polymers.

38 Claims, 0 Drawing figures  
Exemplary Claim Number: 1

Full Title Citation Front Review Classification Date Reference Sequences Attachments

IMC Draw Desc Image

☐ 38. Document ID: US 5087457 A

L8: Entry 38 of 52

File: USPT

Feb 11, 1992

US-PAT-NO: 5087457  
DOCUMENT-IDENTIFIER: US 5087457 A  
\*\* See image for Certificate of Correction \*\*

TITLE: Synergistic microbicides containing ionene polymers and borates for the control of fungi on surfaces

DATE-ISSUED: February 11, 1992

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Bryant; Stephan D.	Memphis	TN		
Packer; John	Dorval			CA
Johnstone; Thomas D.	Montreal			CA

US-CL-CURRENT: 424/78.37; 424/658, 424/659, 424/660, 514/642

ABSTRACT:

A mixture of an ionene polymer and a borate that is useful for the control of fungi. This microbicidal mixture is especially effective on the surfaces of wood, leather, plastics, paint, paper and paperboard, and textiles.

3 Claims, 0 Drawing figures  
Exemplary Claim Number: 1

Full Title Citation Front Review Classification Date Reference Sequences Attachments

IMC Draw Desc Image

☐ 39. Document ID: US 4980067 A

L8: Entry 39 of 52

File: USPT

Dec 25, 1990

US-PAT-NO: 4980067  
DOCUMENT-IDENTIFIER: US 4980067 A

TITLE: Polyionene-transformed microporous membrane

DATE-ISSUED: December 25, 1990

INVENTOR-INFORMATION:



NAME	CITY	STATE	ZIP CODE	COUNTRY
Hou; Kenneth C.	South Glastonbury	CT		
Hou; Chung-Jen	South Windsor	CT		
Chen; Haunn-Lin	Darien	CT		

US-CL-CURRENT: 210/638; 210/490, 427/245

## ABSTRACT:

A microporous membrane modified by coating or grafting thereon a polyionene material. The thus-modified microporous membrane is useful for separating microorganism-originated contaminants from biological liquids.

29 Claims, 0 Drawing figures

Exemplary Claim Number: 15

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	IMC	Draw Desc	Image
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☐ 40. Document ID: US 4970211 A

L8: Entry 40 of 52

File: USPT

Nov 13, 1990

US-PAT-NO: 4970211

DOCUMENT-IDENTIFIER: US 4970211 A

TITLE: Ionene polymeric compositions, their preparation and use

DATE-ISSUED: November 13, 1990

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Fenyas; Joseph G.	Germantown	TN		
Pera; John D.	Cordova	TN		

US-CL-CURRENT: 504/155; 514/252.11, 514/253.01, 544/357, 544/360

## ABSTRACT:

Novel capped polymeric quaternary ammonium compositions formed by reacting ionene type polymers with tertiary amines are useful as microbicides, corrosion inhibitors, debonding agents, flocculants, softeners, plant growth regulators, and demulsifiers.

1 Claims, 0 Drawing figures

Exemplary Claim Number: 1

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	IMC	Draw Desc	Image
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☐ 41. Document ID: US 4960590 A

L8: Entry 41 of 52

File: USPT

Oct 2, 1990

US-PAT-NO: 4960590

DOCUMENT-IDENTIFIER: US 4960590 A

**\*\* See image for Certificate of Correction \*\***

TITLE: Novel polymeric quaternary ammonium trihalides

DATE-ISSUED: October 2, 1990

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Hollis; C. George	Germantown	TN		
Rayudu; S. Rao	Germantown	TN		

US-CL-CURRENT: 525/540; 424/405, 424/78.17, 514/642, 528/392, 528/397, 528/422, 528/59

## ABSTRACT:

Polymeric quaternary ammonium trihalides, preferably triiodides, and use of polymeric quaternary ammonium trihalides to inhibit the growth of microorganisms in aquatic systems, to disinfect or sanitize surfaces and to disinfect the skin of animals, including humans.

9 Claims, 0 Drawing figures  
Exemplary Claim Number: 1

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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☐ 42. Document ID: US 4851532 A

L8: Entry 42 of 52

File: USPT

Jul 25, 1989

US-PAT-NO: 4851532

DOCUMENT-IDENTIFIER: US 4851532 A

**\*\* See image for Certificate of Correction \*\***

TITLE: Ionene polymeric compositions, their preparation and use

DATE-ISSUED: July 25, 1989

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Fenyess; Joseph G.	Germantown	TN		
Pera; John D.	Pera	TN		

US-CL-CURRENT: 544/357; 504/235, 514/252.11, 514/253.01, 528/423, 544/360, 544/401, 8/188, 8/567, 8/606

## ABSTRACT:

Novel capped polymeric quaternary ammonium compositions formed by reacting ionene type polymers with tertiary amines are useful as microbicides, corrosion inhibitors, debonding agents, flocculants, softeners, plant growth regulators, and demulsifiers.

6 Claims, 0 Drawing figures  
Exemplary Claim Number: 1

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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☐ 43. Document ID: US 4791063 A

L8: Entry 43 of 52

File: USPT

Dec 13, 1988

US-PAT-NO: 4791063

DOCUMENT-IDENTIFIER: US 4791063 A

TITLE: Polyionene transformed modified polysaccharide supports

DATE-ISSUED: December 13, 1988

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Hou; Kenneth C.	S. Glastonbury	CT		
Hou; Chung-Jen	South Windsor	CT		
Chen; Haunn-Lin	Vernon	CT		

US-CL-CURRENT: 435/243; 435/252.1, 435/308.1, 435/803, 524/27, 524/58, 525/54.3, 526/238.2

## ABSTRACT:

Polyionene-transformed modified polymer-polysaccharide separation matrix and use thereof in removing contaminants of microorganism origin from biological liquids are disclosed.

55 Claims, 20 Drawing figures

Exemplary Claim Number: 1,21,50

Number of Drawing Sheets: 13

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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☐ 44. Document ID: US 4789489 A

L8: Entry 44 of 52

File: USPT

Dec 6, 1988

US-PAT-NO: 4789489

DOCUMENT-IDENTIFIER: US 4789489 A

TITLE: Method for the control of mollusks

DATE-ISSUED: December 6, 1988

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Hollis; C. George	Germantown	TN		
Lutey; Richard W.	Memphis	TN		

US-CL-CURRENT: 210/755; 210/764, 210/765, 514/642

## ABSTRACT:

A method for the control of fouling by marine and fresh water mollusks through the use of an ionene polymer. The disclosed method is particularly useful in controlling fouling by species of fresh water Asiatic clams of the genus Corbicula, the most common of which is C. fluminea.

22 Claims, 0 Drawing figures

Exemplary Claim Number: 1

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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☐ 45. Document ID: US 4778813 A

L8: Entry 45 of 52

File: USPT

Oct 18, 1988

US-PAT-NO: 4778813

DOCUMENT-IDENTIFIER: US 4778813 A

TITLE: Polymeric quaternary ammonium compounds, their preparation and use

DATE-ISSUED: October 18, 1988

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Fenyese; Joseph G.	Germantown	TN		
Pera; John D.	Memphis	TN		

US-CL-CURRENT: 514/357; 162/32, 210/735, 514/642, 514/643, 546/329, 564/286, 564/292, 8/188, 8/568, 8/606

## ABSTRACT:

Novel capped polymeric quaternary ammonium compositions formed by reacting ionene type polymers with tertiary amines are useful as microbicides, corrosion inhibitors, debonding agents, flocculants, softeners, and demulsifiers.

6 Claims, 0 Drawing figures

Exemplary Claim Number: 1,5

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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PMC	Draw Desc	Image
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☐ 46. Document ID: US 4581058 A

L8: Entry 46 of 52

File: USPT

Apr 8, 1986

US-PAT-NO: 4581058

DOCUMENT-IDENTIFIER: US 4581058 A

**\*\* See image for Certificate of Correction \*\***

TITLE: Polymeric quaternary ammonium compounds and their uses

DATE-ISSUED: April 8, 1986

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Fenyese; Joseph G.	Germantown	TN		
Pera; John D.	Memphis	TN		

US-CL-CURRENT: 504/155; 504/156, 504/159, 504/160, 514/252.11, 514/252.12, 514/253.01, 514/254.01, 514/408, 514/422, 514/642, 514/643, 544/357

## ABSTRACT:

Novel polyquaternary ammonium compounds prepared from N,N'-bis(dialkylaminoalkyl)ureas, hydrochloric acid, epichlorohydrin and tertiary amines are useful as microbicides, corrosion inhibitors, debonding agents,

flocculants, softeners, anti-static agents, and demulsifiers.

11 Claims, 0 Drawing figures

Exemplary Claim Number: 1

Full Title Citation Front Review Classification Date Reference Sequences Attachments

IMC Draw Desc Image

☐ 47. Document ID: US 4506081 A

L8: Entry 47 of 52

File: USPT

Mar 19, 1985

US-PAT-NO: 4506081

DOCUMENT-IDENTIFIER: US 4506081 A

**\*\* See image for Certificate of Correction \*\***

TITLE: Polymeric quaternary ammonium compounds and their uses

DATE-ISSUED: March 19, 1985

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Fenyese; Joseph G.	Germantown	TN		
Pera; John D.	Memphis	TN		

US-CL-CURRENT: 548/523; 210/702, 210/708, 210/729, 504/155, 504/156, 504/159, 528/367, 544/372, 544/400, 546/265, 564/59

ABSTRACT:

Novel polyquaternary ammonium compounds prepared from N,N'-bis(dialkylaminoalkyl)ureas, hydrochloric acid, epichlorohydrin and tertiary amines are useful as microbicides, corrosion inhibitors, debonding agents, flocculants, softeners, anti-static agents, and demulsifiers.

11 Claims, 0 Drawing figures

Exemplary Claim Number: 1

Full Title Citation Front Review Classification Date Reference Sequences Attachments

IMC Draw Desc Image

☐ 48. Document ID: US 4250269 A

L8: Entry 48 of 52

File: USPT

Feb 10, 1981

US-PAT-NO: 4250269

DOCUMENT-IDENTIFIER: US 4250269 A

TITLE: Water-soluble mixtures of quaternary ammonium polymers, nonionic and/or cationic vinyl-addition polymers, and nonionic and/or cationic surfactants

DATE-ISSUED: February 10, 1981

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Buckman; Robert H.	Memphis	TN		
Hoekstra; Philip M.	Memphis	TN		
Pera; John D.	Memphis	TN		

US-CL-CURRENT: 524/236; 162/135, 162/167, 524/375, 524/502, 524/514, 524/518, 8/496,  
8/555

ABSTRACT:

Water-soluble polymeric mixtures prepared by mixing 1 to 10 parts by weight of a quaternary ammonium polymer with 0.5 to 7 parts by weight of a high molecular weight nonionic and/or cationic vinyl-addition polymer, and 0.1 to 5 parts by weight of a nonionic and/or cationic surfactant have utility in many diverse applications.

14 Claims, 0 Drawing figures  
Exemplary Claim Number: 1

Full Title Citation Front Review Classification Date Reference Sequences Attachments

Full Title Citation Front Review Classification Date Reference Sequences Attachments

☐ 49. Document ID: US 4054542 A

L8: Entry 49 of 52

File: USPT

Oct 18, 1977

US-PAT-NO: 4054542

DOCUMENT-IDENTIFIER: US 4054542 A

TITLE: Amine-epichlorohydrin polymeric compositions

DATE-ISSUED: October 18, 1977

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Buckman; John D.	Memphis	TN		
Buckman; Stanley J.	Memphis	TN		
Mercer; Gerald D.	Memphis	TN		
Pera; John D.	Memphis	TN		

US-CL-CURRENT: 528/405; 156/330.9, 162/164.3, 162/164.6, 210/736, 210/764, 428/413,  
504/155, 504/160, 564/476, 8/554

ABSTRACT:

Cationic, water-soluble, amine-epichlorohydrin polymeric compositions formed by reacting polymeric bis(3-chloro-2-hydroxypropyl) amines with tertiary amines are useful in papermaking processes, in water purification processes, textile manufacturing processes, and for the control of pests such as algae, bacteria and fungi.

32 Claims, 0 Drawing figures  
Exemplary Claim Number: 1

Full Title Citation Front Review Classification Date Reference Sequences Attachments

Full Title Citation Front Review Classification Date Reference Sequences Attachments

☐ 50. Document ID: WO 9702744 A1

L8: Entry 50 of 52

File: EPAB

Jan 30, 1997

PUB-NO: WO009702744A1

DOCUMENT-IDENTIFIER: WO 9702744 A1

TITLE: TABLETIZED IONENE POLYMERS

PUBN-DATE: January 30, 1997

INVENTOR-INFORMATION:

NAME

COUNTRY

DEL, CORRAL FERNANDO

JAQUESS, PERCY A

PUCKETT, WALLACE E

FUES, RUSSELL E

INT-CL (IPC): A01 N 33/12; A01 N 25/34; C02 F 1/50

EUR-CL (EPC): A01N025/34; A01N033/12, C02F001/50

ABSTRACT:

CHG DATE=19990617 STATUS=O>Tabletized ionene polymers, methods for their preparation and their use in water treatment is described. The tablet contains about 5 to about 60 percent by weight of an ionene polymer, about 40 to about 95 percent by weight of a salt carrier matrix, 0 to about 20 percent by weight of a disintegration rate regulator, and 0 to about 10 percent by weight of an anticaking agent. The tablets may be made by mixing an aqueous solution of an ionene polymer with a carrier matrix to form a moist mass, drying the moist mass to form granules, reducing the granule size to form a powder, and compressing the powder into a tablet. The tablets are useful in a wide variety of water treatment applications. Accordingly, the specification describes a method for controlling the growth of microorganisms in an aqueous system. Using the method, one treats an aqueous system with an ionene polymer in an amount effective to control the growth of at least one microorganism. The ionene polymer is contained in a tablet of the invention.

Full Title Citation Front Review Classification Date Reference Sequences Attachments

Full Desc Clip Img Image

❑ 51. Document ID: WO 9702744 A1 MX 204741 B ZA 9605729 A AU 9664598 A US 5637308 A US 5707534 A US 5709880 A NO 9800113 A CZ 9800077 A3 SK 9800028 A3 EP 871359 A1 BR 9609499 A JP 11508917 W NZ 312601 A EP 871359 B1 MX 9800301 A1 DE 69606200 E ES 2143211 T3 CN 1192649 A AU 200048656 A AU 742265 B

L8: Entry 51 of 52

File: DWPI

Jan 30, 1997

DERWENT-ACC-NO: 1997-118769

DERWENT-WEEK: 200246

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TITLE: Ionene polymer tablets for use in water treatment applications - comprise a salt carrier matrix, an ionene polymer, opt. in combination with a disintegration rate regulator and an anticaking agent.

INVENTOR: DE CORRAL, F; FUES, R E ; JACQUESS, P A ; PUCKETT, W E ; CORRAL, L F D ; JAQUESS, P A ; DEL CORRAL, F L ; DEL CORRAL, F ; DEL CARRAL, L F ; DEL, C F ; DEL CORRAL, L F ; DEL CORRAL, I F

PRIORITY-DATA: 1995US-0500468 (July 10, 1995), 1995US-0500466 (July 10, 1995), 1995US-0500467 (July 10, 1995), 2000AU-0048656 (July 17, 2000)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
WO 9702744 A1	January 30, 1997	E	056	A01N033/12
MX 204741 B	October 16, 2001		000	A01N025/34
ZA 9605729 A	April 30, 1997		054	C07C000/00
AU 9664598 A	February 10, 1997		000	
US 5637308 A	June 10, 1997		017	A61K025/08
US 5707534 A	January 13, 1998		018	C02F001/50
US 5709880 A	January 20, 1998		016	A61K025/08
NO 9800113 A	March 9, 1998		000	C02F001/50
CZ 9800077 A3	June 17, 1998		000	
SK 9800028 A3	August 5, 1998		000	
EP 871359 A1	October 21, 1998	E	000	
BR 9609499 A	May 25, 1999		000	
JP 11508917 W	August 3, 1999		056	A01N033/12
NZ 312601 A	October 28, 1999		000	C02F001/50
EP 871359 B1	January 12, 2000	E	000	
MX 9800301 A1	July 1, 1998		000	A01N033/12
DE 69606200 E	February 17, 2000		000	
ES 2143211 T3	May 1, 2000		000	A01N033/12
CN 1192649 A	September 9, 1998		000	A01N033/12
AU 200048656 A	October 5, 2000		000	A01N025/34
AU 742265 B	December 20, 2001		000	A01N025/34

69606200 E INT-CL (IPC): A01 N 25/34; A01 N 33/12; A01 N 61/00; A61 K 25/08; A61 K 31/785; C02 F 1/50; C07 C 0/00

ABSTRACTED-PUB-NO: EP 871359B

BASIC-ABSTRACT:

An ionene polymer (IP) tablet comprises (a) 40-95 wt.% of a salt carrier matrix (SCM); (b) 5-60 wt.% of an IP; (c) 0-20 wt.% of a disintegration rate regulator (DRR); and (d) 0-10 wt.% of an anticaking agent.

The tablet has a hygroscopicity index of no more than 3 wt.%.

Also claimed is prepn. of the tablets by (a) mixing an aq. soln. of an IP with a SCM to form a moist mass, (b) drying the moist mass to form dry granules, (c) reducing the size of the granules to form a powder and (d) compressing the powder into a tablet.

USE - Used in water treatment applications, partic. for controlling growth of microorganisms, including preventing biofilm and/or slime formation.

ADVANTAGE- The tablets may be quick disintegration or sustained release tablets.

ABSTRACTED-PUB-NO:

US 5637308A EQUIVALENT-ABSTRACTS:

An ionene polymer (IP) tablet comprises (a) 40-95 wt.% of a salt carrier matrix (SCM); (b) 5-60 wt.% of an IP; (c) 0-20 wt.% of a disintegration rate regulator (DRR); and (d) 0-10 wt.% of an anticaking agent.

The tablet has a hygroscopicity index of no more than 3 wt.%.

Also claimed is prepn. of the tablets by (a) mixing an aq. soln. of an IP with a SCM to form a moist mass, (b) drying the moist mass to form dry granules, (c) reducing the size of the granules to form a powder and (d) compressing the powder into a tablet.

USE - Used in water treatment applications, partic. for controlling growth of microorganisms, including preventing biofilm and/or slime formation.

ADVANTAGE- The tablets may be quick disintegration or sustained release tablets.



An ionene polymer tablet comprising: about 40 to about 95 percent by weight of an alkali or alkaline earth metal salt carrier matrix, about 5 to about 60 percent by weight of an ionene polymer, 0 to about 20 percent by weight of a disintegration rate regulator, and 0 to about 10 percent by weight of an anticaking agent, where the tablet has a hygroscopicity index of no more than 3 percent by weight.

US 5707534A

An ionene polymer (IP) tablet comprises (a) 40-95 wt.% of a salt carrier matrix (SCM); (b) 5-60 wt.% of an IP; (c) 0-20 wt.% of a disintegration rate regulator (DRR); and (d) 0-10 wt.% of an anticaking agent.

The tablet has a hygroscopicity index of no more than 3 wt.%.

Also claimed is prepn. of the tablets by (a) mixing an aq. soln. of an IP with a SCM to form a moist mass, (b) drying the moist mass to form dry granules, (c) reducing the size of the granules to form a powder and (d) compressing the powder into a tablet.

USE - Used in water treatment applications, partic. for controlling growth of microorganisms, including preventing biofilm and/or slime formation.

ADVANTAGE- The tablets may be quick disintegration or sustained release tablets.

US 5709880A

An ionene polymer (IP) tablet comprises (a) 40-95 wt.% of a salt carrier matrix (SCM); (b) 5-60 wt.% of an IP; (c) 0-20 wt.% of a disintegration rate regulator (DRR); and (d) 0-10 wt.% of an anticaking agent.

The tablet has a hygroscopicity index of no more than 3 wt.%.

Also claimed is prepn. of the tablets by (a) mixing an aq. soln. of an IP with a SCM to form a moist mass, (b) drying the moist mass to form dry granules, (c) reducing the size of the granules to form a powder and (d) compressing the powder into a tablet.

USE - Used in water treatment applications, partic. for controlling growth of microorganisms, including preventing biofilm and/or slime formation.

ADVANTAGE- The tablets may be quick disintegration or sustained release tablets.

WO 9702744A

Full	Title	Citation	Front	Reform	Classification	Date	Reference	Sequence	Attachments
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Full	Drawings	Clip Art	Image
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☐ 52. Document ID: WO 9404225 A2 ES 2151225 T3 FI 9401659 A NO 9401298 A AU 9349941 A EP 607420 A1 ZA 9306506 A US 5387717 A WO 9404225 A3 US 5401881 A JP 07502923 W AU 663625 B BR 9305634 A NZ 255655 A US 5703131 A EP 827690 A2 EP 607420 B1 MX 186142 B DE 69321931 E ES 2125999 T3 EP 827690 B1 DE 69329506 E FI 200002176 A

L8: Entry 52 of 52

File: DWPI

Mar 3, 1994

DERWENT-ACC-NO: 1994-082868

DERWENT-WEEK: 200105

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TITLE: Detoxification of mustard gas by reaction with bis-tert. di:amine - giving sulphur-contg. quat. ammonium ionene polymer which is useful as microbicide

INVENTOR: DEL CORRAL, F; PUCKETT, W E ; ZOLLINGER, M L ; DEL CORRAL, F ; CORRAL, F D

PRIORITY-DATA: 1992US-0993079 (December 18, 1992), 1992US-0928356 (August 12, 1992),

1994US-0359732 (December 20, 1994), 1995US-0529711 (September 18, 1995)

## PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
WO 9404225 A2	March 3, 1994	E	027	A62D003/00
ES 2151225 T3	December 16, 2000		000	A01N033/12
FI 9401659 A	April 11, 1994		000	A62D000/00
NO 9401298 A	April 11, 1994		000	A62D003/00
AU 9349941 A	March 15, 1994		000	A62D003/00
EP 607420 A1	July 27, 1994	E	000	A01B001/00
ZA 9306506 A	July 27, 1994		032	A01N000/00
US 5387717 A	February 7, 1995		007	C07C209/12
WO 9404225 A3	May 26, 1994		000	
US 5401881 A	March 28, 1995		006	C07C211/63
JP 07502923 W	March 30, 1995		000	A62D003/00
AU 663625 B	October 12, 1995		000	A62D003/00
BR 9305634 A	January 2, 1996		000	A62D003/00
NZ 255655 A	February 24, 1997		000	A62D003/00
US 5703131 A	December 30, 1997		007	A01N033/12
EP 827690 A2	March 11, 1998	E	012	A01N033/12
EP 607420 B1	November 4, 1998	E	000	A62D003/00
MX 186142 B	September 26, 1997		000	C07C209/012
DE 69321931 E	December 10, 1998		000	A62D003/00
ES 2125999 T3	March 16, 1999		000	A62D003/00
EP 827690 B1	September 27, 2000	E	000	A01N033/12
DE 69329506 E	November 2, 2000		000	A01N033/12
FI 200002176 A	October 2, 2000		000	A01N000/00

607420 B1 INT-CL (IPC): A01B 1/00; A01N 0/00; A01N 31/02; A01N 33/012; A01N 33/12; A01N 41/04; A01N 41/10; A01N 41/12; A62D 0/00; A62D 3/00; C01B 0/00; C02F 1/50; C07C 209/012; C07C 209/12; C07C 211/63; C07C 215/40

ABSTRACTED-PUB-NO: EP 607420B

## BASIC-ABSTRACT:

The following are claimed: (A) detoxification of a mustard gas comprising contacting the mustard gas with a bis-tert. diamine to form a quat. ammonium ionene polymer;

(B) microbicidal compsn. comprising an aq. soln. contg. a sulphur-contg. quat. ammonium ionene polymer comprising a repeating unit of formula (II) where X- = counterion, R1,R2 = lower alkyl or CH2CH2OH, A' = S, SCH2CH2S, S-S, or oxidn. prods. of these, B = 1-5C alkylene, CH2CH(OH)CH2 or (CH2)mO(CH2)m, m = 1, 2 or 3; (C) sulphur-contg. quat. ammonium ionene polymers comprising a repeating unit of formula (II), in which all B are CH2CH2 and A' is S or SCH2CH2S (or oxidn. prods. of these).

USE/ADVANTAGE - Process (A) gives polymers contg. repeating units (II). These polymers are much less carcinogenic than mustard gas. The polymers are useful as microbicides in water treatment and on surfaces (esp. surface coatings, wood, agricultural seed, leather, plastics, paints, etc.) For water treatment process the polymers are esp. effective in preventing slime formation in metal working fluids, and the polymer is esp. present in the aq. system in amts. of 0.05-5000 ppm.

The polymers are hydrolytically stable over a wide pH range, are soluble in many solvents, and are efficient.

ABSTRACTED-PUB-NO:

EP 827690B EQUIVALENT-ABSTRACTS:

The following are claimed: (A) detoxification of a mustard gas comprising contacting the mustard gas with a bis-tert. diamine to form a quat. ammonium ionene polymer;

(B) microbicidal compsn. comprising an aq. soln. contg. a sulphur-contg. quat. ammonium ionene polymer comprising a repeating unit of formula (II) where X- = counterion, R1,R2 = lower alkyl or CH<sub>2</sub>CH<sub>2</sub>OH, A' = S, SCH<sub>2</sub>CH<sub>2</sub>S, S-S, or oxidn. prods. of these, B = 1-5C alkylene, CH<sub>2</sub>CH(OH)CH<sub>2</sub> or (CH<sub>2</sub>)<sub>m</sub>O(CH<sub>2</sub>)<sub>m</sub>, m = 1, 2 or 3; (C) sulphur-contg. quat. ammonium ionene polymers comprising a repeating unit of formula (II), in which all B are CH<sub>2</sub>CH<sub>2</sub> and A' is S or SCH<sub>2</sub>CH<sub>2</sub>S (or oxidn. prods. of these).

USE/ADVANTAGE - Process (A) gives polymers contg. repeating units (II). These polymers are much less carcinogenic than mustard gas. The polymers are useful as microbicides in water treatment and on surfaces (esp. surface coatings, wood, agricultural seed, leather, plastics, paints, etc.) For water treatment process the polymers are esp. effective in preventing slime formation in metal working fluids, and the polymer is esp. present in the aq. system in amts. of 0.05-5000 ppm.

The polymers are hydrolytically stable over a wide pH range, are soluble in many solvents, and are efficient.

The following are claimed: (A) detoxification of a mustard gas comprising contacting the mustard gas with a bis-tert. diamine to form a quat. ammonium ionene polymer;

(B) microbicidal compsn. comprising an aq. soln. contg. a sulphur-contg. quat. ammonium ionene polymer comprising a repeating unit of formula (II) where X- = counterion, R1,R2 = lower alkyl or CH<sub>2</sub>CH<sub>2</sub>OH, A' = S, SCH<sub>2</sub>CH<sub>2</sub>S, S-S, or oxidn. prods. of these, B = 1-5C alkylene, CH<sub>2</sub>CH(OH)CH<sub>2</sub> or (CH<sub>2</sub>)<sub>m</sub>O(CH<sub>2</sub>)<sub>m</sub>, m = 1, 2 or 3; (C) sulphur-contg. quat. ammonium ionene polymers comprising a repeating unit of formula (II), in which all B are CH<sub>2</sub>CH<sub>2</sub> and A' is S or SCH<sub>2</sub>CH<sub>2</sub>S (or oxidn. prods. of these).

USE/ADVANTAGE - Process (A) gives polymers contg. repeating units (II). These polymers are much less carcinogenic than mustard gas. The polymers are useful as microbicides in water treatment and on surfaces (esp. surface coatings, wood, agricultural seed, leather, plastics, paints, etc.) For water treatment process the polymers are esp. effective in preventing slime formation in metal working fluids, and the polymer is esp. present in the aq. system in amts. of 0.05-5000 ppm.

The polymers are hydrolytically stable over a wide pH range, are soluble in many solvents, and are efficient.

US 5387717A

Environmentally safe method for detoxification of a mustard gas comprises reacting it with a bis tert. diamine (BTD) to form a quat. ammonium ionene polymer.

Pref. the mustard gas is 2,2'-dichloroethylsulphide, (ClCH<sub>2</sub>CHCH<sub>2</sub>)<sub>2</sub>NEt, (ClCH<sub>2</sub>CH<sub>2</sub>)<sub>2</sub>NMe or (ClCH<sub>2</sub>CH<sub>2</sub>)<sub>3</sub>N and the BTD is tetramethylethylenediamine. Esp. the produced polymer contains repeating units of formula\$

-((+)N(R1)(R2)-B-(+)N(R1)(R2)-CH<sub>2</sub>CH<sub>2</sub>-A-CH<sub>2</sub>CH<sub>2</sub>)-.2X(-).

Where X is a counter ion; R1 and R2 are each lower alkyl or CH<sub>2</sub>CH<sub>2</sub>OH, A is S, NMe, NEt or (ClCH<sub>2</sub>CH<sub>2</sub>)N; B is 1-5C alkylene, CH<sub>2</sub>CH(OH)CH<sub>2</sub> or (CH<sub>2</sub>)<sub>m</sub>O(CH<sub>2</sub>)<sub>m</sub>; and each m is 1-3.

USE - Sulphur contg. quat. ammonium ionene polymers are useful as microbicides for controlling growth of microorganisms in aq. systems and on surfaces as well as for inhibiting slime formation in aq. systems. They are effective for treating wood, surface coatings, (i.e. paint films), leather, agricultural seeds, polymers (including flexible plastic) etc. against e.g. fungi.

US 5401881A

Inhibition of growth of microorganisms or algae in aq. systems comprises addn. of S-contg. quat. ammonium ionene polymer of recurring units of formula (I) and of mol. wt. 1000-5000. In the formula X- is counter ion; R1 and R2 are independently lower alkyl or -CH<sub>2</sub>CH<sub>2</sub>OH; A is -S-, -S-CH<sub>2</sub>CH<sub>2</sub>-S- and their oxidn. prods.

Pref. ionene polymers are poly(thioethylene(dimethylimino)ethylene

-(dimethylimino)ethylene and poly(sulphoxyethylene(dimethylimino)ethylene  
-(dimethylimino)ethylene).

USE - Inhibition of growth of microorganisms in aq. metal working fluids and on surfaces using concns. of ionene polymer of 0.05-5000 ppm. and on wood, paper, plastic, leather, seed, or painted surface using 0.01-0.5 ppm.

US 5703131A

The following are claimed: (A) detoxification of a mustard gas comprising contacting the mustard gas with a bis-tert. diamine to form a quat. ammonium ionene polymer;

(B) microbicidal compsn. comprising an aq. soln. contg. a sulphur-contg. quat. ammonium ionene polymer comprising a repeating unit of formula  $-(NR_1R_2BNR_1R_2BA'B)_{2+.2X}-$  (II) where X- = counterion, R<sub>1</sub>, R<sub>2</sub> = lower alkyl or CH<sub>2</sub>CH<sub>2</sub>OH, A' = S, SCH<sub>2</sub>CH<sub>2</sub>S, S-S, or oxidn. prods. of these, B = 1-5C alkylene, CH<sub>2</sub>CH(OH)CH<sub>2</sub> or (CH<sub>2</sub>)<sub>m</sub>O(CH<sub>2</sub>)<sub>m</sub>, m = 1, 2 or 3; (C) sulphur-contg. quat. ammonium ionene polymers comprising a repeating unit of formula (II), in which all B are CH<sub>2</sub>CH<sub>2</sub> and A' is S or SCH<sub>2</sub>CH<sub>2</sub>S (or oxidn. prods. of these).

USE/ADVANTAGE - Process (A) gives polymers contg. repeating units (II). These polymers are much less carcinogenic than mustard gas. The polymers are useful as microbicides in water treatment and on surfaces (esp. surface coatings, wood, agricultural seed, leather, plastics, paints, etc.) For water treatment process the polymers are esp. effective in preventing slime formation in metal working fluids, and the polymer is esp. present in the aq. system in amts. of 0.05-5000 ppm.

The polymers are hydrolytically stable over a wide pH range, are soluble in many solvents, and are efficient.

WO 9404225A

[Full](#) [Title](#) [Citation](#) [Print](#) [Review](#) [Classification](#) [Date](#) [Reference](#) [Sequences](#) [Attachments](#)

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TREATMENTS	147380
(7 AND TREATMENT).USPT,PGPB,JPAB,EPAB,DWPI.	52
(L7 AND TREATMENT).USPT,PGPB,JPAB,EPAB,DWPI.	52

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## Search Results - Record(s) 1 through 30 of 52 returned.

☐ 1. Document ID: US 20030102095 A1

L8: Entry 1 of 52

File: PGPB

Jun 5, 2003

PGPUB-DOCUMENT-NUMBER: 20030102095

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20030102095 A1

TITLE: Papermaking process using enzyme-treated sludge, and products

PUBLICATION-DATE: June 5, 2003

## INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Hill, Walter B. JR.	Germantown	TN	US	
Hart, Brian G.	Memphis	TN	US	
Lott, Lowell F.	Memphis	TN	US	
Turnbull, Robert J.	Cordova	TN	US	
Fitzhenry, James W.	Memphis	TN	US	
Glover, Daniel E.	Brighton	TN	US	
Hoekstra, Philip M.	Cordova	TN	US	

US-CL-CURRENT: 162/72; 162/158, 162/164.1, 435/278

## ABSTRACT:

Enzyme-treated papermaking sludges are provided, as are methods of making the enzyme-treated sludge. Papermaking processes that incorporate the enzyme-treated papermaking sludges into papermaking pulp are also provided as are paper and paperboard products made from the resultant pulp.

[Full](#) [Title](#) [Citation](#) [Front](#) [Review](#) [Classification](#) [Date](#) [Reference](#) [Sequences](#) [Attachments](#)[PMIC](#) [Draw Desc](#) [Image](#)☐ 2. Document ID: US 20030031644 A1

L8: Entry 2 of 52

File: PGPB

Feb 13, 2003

PGPUB-DOCUMENT-NUMBER: 20030031644

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20030031644 A1

TITLE: Ionene polymers and their use as antimicrobial agents

PUBLICATION-DATE: February 13, 2003

## INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Fitzpatrick, Richard J.	Marblehead	MA	US	
Shackett, Keith K.	Athol	MA	US	
Klinger, Jeffrey D.	Sudbury	MA	US	

US-CL-CURRENT: 424/78.36; 528/423

## ABSTRACT:

Disclosed are ionene polymers having antimicrobial activity. "Ionene polymers" as used in this invention are cationic polymers in which a substantial proportion of the atoms providing the positive charge are quaternized nitrogens located in the main polymeric chain or backbone of the polymer rather than in pendant groups. Also disclosed are antimicrobial compositions comprising ionene polymers and methods for treating microbial infections in mammals comprising the step of administering to a mammal, a therapeutically effective amount of at least one antimicrobial composition of the invention. Also disclosed are antimicrobial compositions comprising at least one ionene polymer and methods for preventing, inhibiting or eliminating the growth, dissemination, and/or the accumulation of microorganisms on a susceptible surface (including, but not limited to, the formation of biofilms on a susceptible surface) comprising the step of contacting such surface with a composition of the invention.

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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Image	Draw Desc	Image
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☐ 3. Document ID: US 20020177828 A1

L8: Entry 3 of 52

File: PGPB

Nov 28, 2002

PGPUB-DOCUMENT-NUMBER: 20020177828  
PGPUB-FILING-TYPE: new  
DOCUMENT-IDENTIFIER: US 20020177828 A1

TITLE: Absorbent materials with covalently-bonded, nonleachable, polymeric antimicrobial surfaces, and methods for preparation

PUBLICATION-DATE: November 28, 2002

## INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Batich, Christopher D.	Gainesville	FL	US	
Schultz, Gregory	Gainesville	FL	US	
Mast, Bruce A.	Gainesville	FL	US	
Olderman, Gerald M.	New Bedford	MA	US	
Lerner, David S.	Boca Raton	FL	US	
Toreki, William	Gainesville	FL	US	

US-CL-CURRENT: 604/367; 604/368

## ABSTRACT:

This invention relates to methods and compositions for materials having a non-leaching coating that has antimicrobial properties. The coating is applied to substrates such as gauze-type wound dressings. Covalent, non-leaching, non-hydrolyzable bonds are formed between the substrate and the polymer molecules that form the coating. A high concentration of anti-microbial groups on multi-length polymer chains and relatively long average chain lengths, contribute to an absorbent or superabsorbent surface with a high level antimicrobial effect.

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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LMC	Draw Desc	Image
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☐ 4. Document ID: US 20020059998 A1

L8: Entry 4 of 52

File: PGPB

May 23, 2002

PGPUB-DOCUMENT-NUMBER: 20020059998

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020059998 A1

TITLE: Methods to control organic contaminants in fibers

PUBLICATION-DATE: May 23, 2002

## INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Glover, Daniel E.	Brighton	TN	US	
Jaquess, Percy	Friendship	TN	US	
Fitzhenry, James W.	Memphis	TN	US	

US-CL-CURRENT: 162/72; 162/199

## ABSTRACT:

Methods to control organic contaminants in fibers are described. One method involves contacting the fibers with a composition containing at least one esterase or lipase or both for a sufficient time and in a sufficient amount to control the organic contaminants present in the fibers. Preferably, the fibers are recycled fibers originating from a variety of sources such as old corrugated containers, old newsprint, mixed office waste, and the like. Resulting paper products formed from the processed fibers are also described as well as methods to make them.

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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LMC	Draw Desc	Image
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☐ 5. Document ID: US 6482392 B1

L8: Entry 5 of 52

File: USPT

Nov 19, 2002

US-PAT-NO: 6482392

DOCUMENT-IDENTIFIER: US 6482392 B1

TITLE: Aerosol antimicrobial compositions

DATE-ISSUED: November 19, 2002

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Zhou; Boli	Antioch	CA		
Ochomogo; Maria G.	Danville	CA		
Shaheen; Elias A.	Danville	CA		
Chung; Jessica Y.	San Jose	CA		

US-CL-CURRENT: 424/45; 424/78.31, 424/78.32, 424/78.33, 424/78.36

## ABSTRACT:

An aerosol antimicrobial composition is provided with the following ingredients: a) an

anionic polymer or prepolymer; (b) a quaternary ammonium compound, the components (a) and (b) combining to form an antimicrobially effective complex; (c) at least one water-soluble or dispersible organic solvent having a vapor pressure of at least 0.001 mm Hg at 25.degree. C., said at least one organic solvent present in a solubilizing--or dispersion--effective amount; (d) an effective amount of a propellant; and (e) the remainder, water. Further is provided a novel method of decontaminating a surface fouled with microorganisms and a dispenser for said aerosol composition. The novel composition advantageously has both disinfectancy (contact efficacy) and residual antimicrobial efficacy.

9 Claims, 0 Drawing figures  
Exemplary Claim Number: 1

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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RMIC	Draw. Desc	Image
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☐ 6. Document ID: US 6471826 B2

L8: Entry 6 of 52

File: USPT

Oct 29, 2002

US-PAT-NO: 6471826

DOCUMENT-IDENTIFIER: US 6471826 B2

TITLE: Methods to control organic contaminants in fibers

DATE-ISSUED: October 29, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Glover; Daniel E.	Brighton	TN		
Jaquess; Percy	Friendship	TN		
Fitzhenry; James W.	Memphis	TN		

US-CL-CURRENT: 162/158; 162/199, 162/DIG.4

ABSTRACT:

Methods to control organic contaminants in fibers are described. One method involves contacting the fibers with a composition containing at least one esterase or lipase or both for a sufficient time and in a sufficient amount to control the organic contaminants present in the fibers. Preferably, the fibers are recycled fibers originating from a variety of sources such as old corrugated containers, old newsprint, mixed office waste, and the like. Resulting paper products formed from the processed fibers are also described as well as methods to make them.

25 Claims, 6 Drawing figures  
Exemplary Claim Number: 1  
Number of Drawing Sheets: 6

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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RMIC	Draw. Desc	Image
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☐ 7. Document ID: US 6395189 B1

L8: Entry 7 of 52

File: USPT

May 28, 2002

US-PAT-NO: 6395189

DOCUMENT-IDENTIFIER: US 6395189 B1



TITLE: Method for the control of biofilms

DATE-ISSUED: May 28, 2002

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Fabri; Jon O.	Charleston	SC		
Heslep; Walter D.	Madison	MS		

US-CL-CURRENT: 210/764; 162/161, 422/16, 422/28, 514/513, 514/580, 514/588, 514/634, 514/666, 514/697

## ABSTRACT:

A process is provided for both removing and controlling biofilms present in industrial cooling and process waters. The process provides a composition which includes the reaction products of an amino base, a formaldehyde, an alkylenepolyamine, and the ammonium salt of an inorganic or organic acid. The composition may be used to remove existing biofilms from process water equipment. Further, lower maintenance dosages may be used to maintain the equipment in a substantially biofilm-free condition.

14 Claims, 0 Drawing figures

Exemplary Claim Number: 1

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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TOC	Draw Desc	Image
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☐ 8. Document ID: US 6369024 B1

L8: Entry 8 of 52

File: USPT

Apr 9, 2002

US-PAT-NO: 6369024

DOCUMENT-IDENTIFIER: US 6369024 B1

TITLE: Laundry detergent compositions with linear amine based polymers to provide appearance and integrity benefits to fabrics laundered therewith

DATE-ISSUED: April 9, 2002

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Panandiker; Rajan Keshav	West Chester	OH		
Randall; Sherri Lynn	Hamilton	OH		
Gosselink; Eugene Paul	Cincinnati	OH		
Wertz; William Conrad	West Harrison	IN		
Hildebrandt; Soren	Speyer			DE
Kappes; Elisabeth	Limburgerhof			DE
Boeckh; Dieter	Limburgerhof			DE

US-CL-CURRENT: 510/499; 510/350, 510/503, 510/504

## ABSTRACT:

Compositions and methods which utilize certain linear amine based polymer, oligomer, or copolymer materials as fabric treatment agents that can impart fabric appearance benefits to fabrics and textiles laundered in washing solutions which contain such materials.

10 Claims, 0 Drawing figures

Exemplary Claim Number: 1

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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RMG	Draw Desc	Image
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☐ 9. Document ID: US 6165954 A

L8: Entry 9 of 52

File: USPT

Dec 26, 2000

US-PAT-NO: 6165954

DOCUMENT-IDENTIFIER: US 6165954 A

TITLE: Enzyme compositions and methods for contact lens cleaning

DATE-ISSUED: December 26, 2000

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Huth; Stanlev W.	Newport Beach	CA		

US-CL-CURRENT: 510/114; 510/112, 510/383, 510/384, 510/391, 510/392, 510/530

## ABSTRACT:

Enzyme compositions and methods employing enzyme compositions are disclosed which are useful for cleaning contact lenses. In one embodiment, a composition in accordance with the present invention comprises an enzyme component effective when released in a liquid medium to remove debris from a contact lens located in the liquid medium; and an activity regulating component effective when released in the liquid medium to deactivate the enzyme component located in the liquid medium. This composition is preferably structured so that the enzyme component is released in the liquid medium before the activity regulating component is so released. The period of time between the release of the enzyme component and the activity regulating component is sufficient to allow the enzyme component to effectively remove debris from a contact lens which is introduced into the liquid medium before or at the same time the enzyme component is released in the liquid medium.

17 Claims, 0 Drawing figures

Exemplary Claim Number: 1

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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RMG	Draw Desc	Image
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☐ 10. Document ID: US 6149822 A

L8: Entry 10 of 52

File: USPT

Nov 21, 2000

US-PAT-NO: 6149822

DOCUMENT-IDENTIFIER: US 6149822 A

**\*\* See image for Certificate of Correction \*\***

TITLE: Bio-film control

DATE-ISSUED: November 21, 2000

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Fabri; Jon O.	Charleston	SC		
Heslep; Walter D.	Madison	MI		

US-CL-CURRENT: 210/764; 162/161, 422/16, 422/28, 514/580, 514/588, 514/634, 514/666, 514/697

ABSTRACT:

A process is provided for both removing and controlling biofilms present in industrial cooling and process waters. The process provides a composition which includes the reaction products of an amino base, a formaldehyde, an alkylenepolyamine, and the ammonium salt of an inorganic or organic acid. The composition may be used to remove existing biofilms from process water equipment. Further, lower maintenance dosages may be used to maintain the equipment in a substantially biofilm-free condition.

10 Claims, 0 Drawing figures  
Exemplary Claim Number: 1

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments |

EMC | Draw Desc | Image |

☐ 11. Document ID: US 6147120 A

L8: Entry 11 of 52

File: USPT

Nov 14, 2000

US-PAT-NO: 6147120

DOCUMENT-IDENTIFIER: US 6147120 A

TITLE: Synergistic antimicrobial skin washing compositions

DATE-ISSUED: November 14, 2000

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Swart; Sally K.	Inver Grove Heights	MN		
Hilgren; John	Shorview	MN		
Feil; William	Hastings	MN		
Bennett; Mary	Eagan	MN		

US-CL-CURRENT: 514/721; 514/482, 514/731

ABSTRACT:

A synergistic composition and a synergistic system for use in treating the skin and hair of people and animals comprises separate treatment compositions (solution, dispersions, emulsions, suspensions or other liquid or liquefiable materials). One treatment with a first composition that may comprise at least 0.1% by weight of antimicrobially active aliphatic phenol derivative and treatment with another composition being selected from the group consisting of:

- a solution comprising an antimicrobially active cationic species;
- a comprising antimicrobially active aliphatic phenol derivative, preferably in a different weight percentage of antimicrobially active aliphatic phenol derivative than said one composition, comprising greater than 0.3% antimicrobially active aliphatic phenol derivative;
- a solution comprising an alcohol provides a synergistic antimicrobial action. These compositions do not have to be applied in any particular order, and more than two compositions may be combined in separate or sequential applications. The single compositions of the present invention comprise, for example, a single composition comprising at least 0.1% by weight Triclosan and at least one synergistic additive selected from the group consisting of chlorhexidene gluconate, solutions with greater

than 0.3% Triclosan and an alcohol. These compositions, both as single compositions or as separate compositions have been found to provide synergistic antimicrobial effects. It is surprising that even when the separate compositions are applied with significant periods of time between application of the individual compositions (e.g., 2, 3, 5 or even 8 hours between applications) a synergistic effect may be provided. This is believed to be at least in part because some of the materials may persist on the skin and later would be combined with the application of the other synergistic composition. Because of the unique ability to provide synergy in separate compositions, with gaps in time between application of the separate materials, a system of washing, cleansing, lubricating, and moisturizing compositions may be provided within a health care complex. In this manner, as an individual applies the various compositions over the course of the day, due to varying activity, not only will an individual application of antimicrobial agent occur, but a synergistic effect can be initiated.

4 Claims, 15 Drawing figures  
Exemplary Claim Number: 1  
Number of Drawing Sheets: 15

Full Title Citation Front Review Classification Date Reference Sequences Attachments

Table Draw Desc Image

☐ 12. Document ID: US 6120690 A

L8: Entry 12 of 52

File: USPT

Sep 19, 2000

US-PAT-NO: 6120690

DOCUMENT-IDENTIFIER: US 6120690 A

TITLE: Clarification of water and wastewater

DATE-ISSUED: September 19, 2000

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Haase; Richard Alan	Sugar Land	TX	77487-0623	

US-CL-CURRENT: 210/728; 210/735, 210/736, 252/180

ABSTRACT:

This invention provides a process for clarifying waters and wastewaters by using aluminum salts and/or aluminum polymers and newly formulated high molecular weight quaternized polymers. The aluminum polymers and the high molecular weight quaternized polymers are blended in the water or wastewater to form a flocculated suspension, causing liquid-solid separation. The quaternized polymers have a molecular weight of greater than approximately 1,000,000 and have a viscosity greater than about 1,000 cps at a concentration of approximately 20% in water. Preferably, poly-aluminum hydroxychloride, poly-aluminum chloride and poly-aluminum siloxane sulfate are used as aluminum polymers along with high molecular weight quaternized polymers such as di-allyl di-methyl ammonium chloride (DADMAC), to significantly improve liquid-solid separation in waters and wastewaters. Aluminum salts, such as alums and aluminum chloride, can also be used along with the quaternized polymers to clarify water. In addition, algae can be removed from water by blending at least one aluminum salt and/or at least one aluminum polymer with a quaternized polymer.

22 Claims, 0 Drawing figures  
Exemplary Claim Number: 1

Full Title Citation Front Review Classification Date Reference Sequences Attachments

Table Draw Desc Image

☐ 13. Document ID: US 6080387 A

L8: Entry 13 of 52

File: USPT

Jun 27, 2000

US-PAT-NO: 6080387

DOCUMENT-IDENTIFIER: US 6080387 A

TITLE: Aerosol antimicrobial compositions

DATE-ISSUED: June 27, 2000

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Zhou; Boli	Antioch	CA		
Ochomogo; Maria G.	Danville	CA		
Shaheen; Elias A.	Walnut Creek	CA		

US-CL-CURRENT: 424/45; 424/78.31, 424/78.32, 424/78.33, 424/78.35, 424/78.36

## ABSTRACT:

An aerosol antimicrobial composition is provided with the following ingredients: a) an anionic polymer or prepolymer; (b) a quaternary ammonium compound, the components (a) and (b) combining to form an antimicrobially effective complex; (c) at least one water-soluble or dispersible organic solvent having a vapor pressure of at least 0.001 mm Hg at 25.degree. C., said at least one organic solvent present in a solubilizing--or dispersion--effective amount; (d) an effective amount of a propellant; and (e) the remainder, water. Further is provided a novel method of decontaminating a surface fouled with microorganisms and a dispenser for said aerosol composition. The novel composition advantageously has both disinfectancy (contact efficacy) and residual antimicrobial efficacy.

14 Claims, 0 Drawing figures

Exemplary Claim Number: 1

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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Full	Draw Desc	Image
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☐ 14. Document ID: US 6054054 A

L8: Entry 14 of 52

File: USPT

Apr 25, 2000

US-PAT-NO: 6054054

DOCUMENT-IDENTIFIER: US 6054054 A

TITLE: Chemical for the prevention of attachment of microorganisms to surfaces

DATE-ISSUED: April 25, 2000

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Robertson; Linda R.	St. Charles	IL		
St. John; Michael R.	Chicago	IL		

US-CL-CURRENT: 210/698; 162/161, 162/DIG.4, 210/701, 210/764, 210/928

## ABSTRACT:

The inventors have discovered a new method of treating paper machine white water

aqueous systems and surfaces in the paper machine white water aqueous systems that prevents or inhibits the adhesion of bacterial cells to the surfaces and thereby controls the biological fouling of the surfaces. The process comprises adding to the aqueous system an adhesion-inhibiting amount of vinyl cationic polymer. This method effectively inhibits the adhesion of the bacterial cells to exposed surfaces without killing the fouling organisms and also without harming non-target organisms. In addition, the method of the present invention advantageously does not cause the formation of harmful substances in the effluent from the systems treated.

6 Claims, 2 Drawing figures  
Exemplary Claim Number: 1  
Number of Drawing Sheets: 2

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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RMIC	Draw Desc	Image
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☐ 15. Document ID: US 6008236 A

L8: Entry 15 of 52

File: USPT

Dec 28, 1999

US-PAT-NO: 6008236  
DOCUMENT-IDENTIFIER: US 6008236 A  
\*\* See image for Certificate of Correction \*\*

TITLE: Synergistic antimicrobial compositions containing an ionene polymer and a pyrithione salt and methods of using the same

DATE-ISSUED: December 28, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Oppong; David	Memphis	TN		
Fues; Russel E.	Memphis	TN		
Canullo; Graciella H.	Olive Branch	MS		

US-CL-CURRENT: 514/345, 424/78.09, 424/78.36, 424/78.37, 504/152, 504/155, 504/159, 504/160, 514/188

ABSTRACT:

Compositions comprising an ionene polymer and a pyrithione salt are disclosed which are synergistically effective compared to the respective components alone in controlling the growth of microorganisms in or on a material or medium. Methods to control the growth of microorganisms and prevent spoilage caused by microorganisms with the use of the compositions of the present invention are also disclosed.

44 Claims, 0 Drawing figures  
Exemplary Claim Number: 1

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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RMIC	Draw Desc	Image
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☐ 16. Document ID: US 5906750 A

L8: Entry 16 of 52

File: USPT

May 25, 1999

US-PAT-NO: 5906750  
DOCUMENT-IDENTIFIER: US 5906750 A

TITLE: Method for dewatering of sludge

DATE-ISSUED: May 25, 1999

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Haase; Richard Alan	Sugar Land	TX	77487-0623	

US-CL-CURRENT: 210/727; 210/609, 210/728

## ABSTRACT:

A chemical method is provided for the dewatering of biological sludge that has been digested by a thermophilic digestion process. Five versions of the chemical sludge dewatering method are presented. The primary component in the five versions is a polyquaternary amine, preferably of the di-allyl di-methyl ammonium chloride (DADMAC) variety and from the epichlorohydrin di-methyl amine (epi-DMA) variety. By the first sludge dewatering method, the polyquaternary amine is added directly, along with a polyacrylamide, to the biological sludge. By the second sludge dewatering method, the polyquaternary amine and an anionic polyacrylamide are added separately. By the third sludge dewatering method, a quaternized polyacrylamide, having the polyquaternary amine as part of its polymer chain, is produced by copolymerization of acrylamide with monomers of polyquaternary amine quaternization and is added individually to the sludge. By the fourth sludge dewatering method, the quaternized polyacrylamide from method three is added in concert with a cationic polyacrylamide to the sludge. By the fifth sludge dewatering method, aluminum sulfate, ferric chloride and blends thereof are added, along with polyquaternary amine, as the primary component to the sludge.

15 Claims, 0 Drawing figures

Exemplary Claim Number: 1

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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PMC	Draw Desc	Image
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☐ 17. Document ID: US 5866016 A

L8: Entry 17 of 52

File: USPT

Feb 2, 1999

US-PAT-NO: 5866016

DOCUMENT-IDENTIFIER: US 5866016 A

TITLE: Methods and compositions for controlling biofouling using combinations of an ionene polymer and a salt of dodecylamine

DATE-ISSUED: February 2, 1999

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Jaquess; Percy A.	Tigrett	TN		
Del Corral; Luis Fernando	Memphis	TN		
Clark; Richard A.	Collierville	TN		

US-CL-CURRENT: 210/764; 424/78.09, 424/78.1

## ABSTRACT:

The present invention relates to a method to inhibit bacteria from adhering to a submergible surface. The method contacts the submergible surface with an ionene polymer and a salt of dodecylamine in a combined amount effective to inhibit bacterial adhesion to the submergible surface. The present invention also relates to a method for controlling biofouling of an aqueous system. This method adds an ionene polymer

and a salt of dodecylamine in a combined amount effective to inhibit bacteria from adhering to a submerged surface within the aqueous system. This method effectively controls biofouling without substantially killing the fouling organisms. The present invention also relates to compositions containing an ionene polymer and a salt of dodecylamine and useable in the above methods. The compositions comprise an ionene polymer and a salt of dodecylamine in a combined amount effective to inhibit bacteria from adhering to submergible or submerged surfaces.

25 Claims, 0 Drawing figures  
Exemplary Claim Number: 1

Full Title Citation Front Review Classification Date Reference Sequences Attachments

Full Title Citation Front Review Classification Date Reference Sequences Attachments

☐ 18. Document ID: US 5846435 A

L8: Entry 18 of 52

File: USPT

Dec 8, 1998

US-PAT-NO: 5846435  
DOCUMENT-IDENTIFIER: US 5846435 A

TITLE: Method for dewatering of sludge

DATE-ISSUED: December 8, 1998

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Haase; Richard Alan	Sugar Land	TX	77487-0623	

US-CL-CURRENT: 210/727; 210/609, 210/728

ABSTRACT:

A chemical method is provided for the dewatering of biological sludge that has been digested by a thermophilic digestion process. Four versions of the chemical method are presented. The primary component in the four versions is a polyquaternary amine, preferably of the di-allyl di-methyl ammonium chloride (DADMAC) variety and from the epichlorohydrin di-methyl amine (epi-DMA) variety. By the first method, the polyquaternary amine is added directly, along with a cationic polyacrylamide, to the biological sludge. By the second method, the polyquaternary amine and an anionic polyacrylamide are added separately. By the third method, a quaternized polyacrylamide, having the polyquaternary amine as part of its polymer chain, is produced by copolymerization of acrylamide with monomers of polyquaternary amine quaternization and is added individually to the sludge. By the fourth method, the quaternized polyacrylamide from method three is added in concert with a cationic polyacrylamide to the sludge.

16 Claims, 0 Drawing figures  
Exemplary Claim Number: 1

Full Title Citation Front Review Classification Date Reference Sequences Attachments

Full Title Citation Front Review Classification Date Reference Sequences Attachments

☐ 19. Document ID: US 5783532 A

L8: Entry 19 of 52

File: USPT

Jul 21, 1998

US-PAT-NO: 5783532  
DOCUMENT-IDENTIFIER: US 5783532 A  
\*\* See image for Certificate of Correction \*\*



TITLE: Enzyme compositions and methods for contact lens cleaning

DATE-ISSUED: July 21, 1998

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Huth; Stanley W.	Newport Beach	CA		

US-CL-CURRENT: 510/114; 435/184, 510/392, 510/393, 510/530, 514/839

ABSTRACT:

Enzyme compositions and methods employing enzyme compositions are disclosed which are useful for cleaning contact lenses. In one embodiment, a composition in accordance with the present invention comprises an enzyme component effective when released in a liquid medium to remove debris from a contact lens located in the liquid medium; and an activity regulating component effective when released in the liquid medium to deactivate the enzyme component located in the liquid medium. This composition is preferably structured so that the enzyme component is released in the liquid medium before the activity regulating component is so released. The period of time between the release of the enzyme component and the activity regulating component is sufficient to allow the enzyme component to effectively remove debris from a contact lens which is introduced into the liquid medium before or at the same time the enzyme component is released in the liquid medium.

20 Claims, 0 Drawing figures

Exemplary Claim Number: 1

[Full](#) [Title](#) [Citation](#) [Front](#) [Review](#) [Classification](#) [Date](#) [Reference](#) [Sequences](#) [Attachments](#)

[LINC](#) [Draw Desc](#) [Image](#)

☐ 20. Document ID: US 5776960 A

L8: Entry 20 of 52

File: USPT

Jul 7, 1998

US-PAT-NO: 5776960

DOCUMENT-IDENTIFIER: US 5776960 A

TITLE: Synergistic antimicrobial compositions containing an ionene polymer and a pyrithione salt and methods of using the same

DATE-ISSUED: July 7, 1998

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Oppong; David	Memphis	TN		
Fues; Russel E.	Memphis	TN		
Vunk; Graciela H.	Olive Branch	MS		

US-CL-CURRENT: 514/345; 424/78.09, 424/78.37, 514/188

ABSTRACT:

Compositions comprising an ionene polymer and a pyrithione salt are disclosed which are synergistically effective compared to the respective components alone in controlling the growth of microorganisms in or on a material or medium. Methods to control the growth of microorganisms and prevent spoilage caused by microorganisms with the use of the compositions of the present invention are also disclosed.

41 Claims, 0 Drawing figures  
Exemplary Claim Number: 1

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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FIG	Draw Desc	Image
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☐ 21. Document ID: US 5746838 A

L8: Entry 21 of 52

File: USPT

May 5, 1998

US-PAT-NO: 5746838

DOCUMENT-IDENTIFIER: US 5746838 A

TITLE: Enzyme compositions and methods for contact lens cleaning

DATE-ISSUED: May 5, 1998

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Huth; Stanley W.	Newport Beach	CA		

US-CL-CURRENT: 134/27; 134/28, 134/901, 435/184, 514/839, 514/840

ABSTRACT:

Enzyme compositions and methods employing enzyme compositions are disclosed which are useful for cleaning contact lenses. In one embodiment, a composition in accordance with the present invention comprises an enzyme component effective when released in a liquid medium to remove debris from a contact lens located in the liquid medium; and an activity regulating component effective when released in the liquid medium to deactivate the enzyme component located in the liquid medium. This composition is preferably structured so that the enzyme component is released in the liquid medium before the activity regulating component is so released. The period of time between the release of the enzyme component and the activity regulating component is sufficient to allow the enzyme component to effectively remove debris from a contact lens which is introduced into the liquid medium before or at the same time the enzyme component is released in the liquid medium.

15 Claims, 0 Drawing figures  
Exemplary Claim Number: 1

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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FIG	Draw Desc	Image
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☐ 22. Document ID: US 5709880 A

L8: Entry 22 of 52

File: USPT

Jan 20, 1998

US-PAT-NO: 5709880

DOCUMENT-IDENTIFIER: US 5709880 A

**\*\* See image for Certificate of Correction \*\***

TITLE: Method of making tabletized ionene polymers

DATE-ISSUED: January 20, 1998

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Del Corral; L. Fernando	Memphis	TN		
Jaquess; Percy A.	Tigrett	TN		
Puckett; Wallace E.	Memphis	TN		
Fues; Russel E.	Memphis	TN		

US-CL-CURRENT: 424/464; 210/735, 424/408, 424/468, 424/78.1, 424/78.12, 523/414,  
523/420, 524/394, 524/400, 524/456, 524/922, 528/488, 528/499

**ABSTRACT:**

Tabletized ionene polymers, methods for their preparation and their use in water treatment is described. The tablet contains about 5 to about 60 percent by weight of an ionene polymer, about 40 to about 95 percent by weight of a salt carrier matrix, 0 to about 10 percent by weight of a disintegration rate regulator, and 0 to about 10 percent by weight of an anticaking agent. The tablets may be made by mixing an aqueous solution of an ionene polymer with a carrier matrix to form a moist mass, drying the moist mass to form granules, reducing the granule size to form a powder, and compressing the powder into a tablet. The tablets are useful in a wide variety of water treatment applications. Accordingly, the specification describes a method for controlling the growth of microorganisms in an aqueous system. Using the method, one treats an aqueous system with an ionene polymer in an amount effective to control the growth of at least one microorganism. The ionene polymer is contained in a tablet of the invention.

13 Claims, 2 Drawing figures  
Exemplary Claim Number: 1  
Number of Drawing Sheets: 2

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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Title	Draw Desc	Image
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☐ 23. Document ID: US 5707534 A

L8: Entry 23 of 52

File: USPT

Jan 13, 1998

US-PAT-NO: 5707534

DOCUMENT-IDENTIFIER: US 5707534 A

TITLE: Use of tabletized ionene polymers in water treatment

DATE-ISSUED: January 13, 1998

**INVENTOR-INFORMATION:**

NAME	CITY	STATE	ZIP CODE	COUNTRY
Del Corral; L. Fernando	Memphis	TN		
Jaquess; Percy A.	Tigrett	TN		
Puckett; Wallace E.	Memphis	TN		
Fues; Russell E.	Memphis	TN		

US-CL-CURRENT: 210/755; 210/764**ABSTRACT:**

Tabletized ionene polymers, methods for their preparation and their use in water treatment is described. The tablet contains about 5 to about 60 percent by weight of an ionene polymer, about 40 to about 95 percent by weight of a salt carrier matrix, 0 to about 10 percent by weight of a disintegration rate regulator, and 0 to about 10 percent by weight of an anticaking agent. The tablets may be made by mixing an aqueous solution of an ionene polymer with a carrier matrix to form a moist mass, drying the

moist mass to form granules, reducing the granule size to form a powder, and compressing the powder into a tablet. The tablets are useful in a wide variety of water treatment applications. Accordingly, the specification describes a method for controlling the growth of microorganisms in an aqueous system. Using the method, one treats an aqueous system with an ionene polymer in an amount effective to control the growth of at least one microorganism. The ionene polymer is contained in a tablet of the invention.

17 Claims, 2 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 2

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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NAME	Draw Desc	Image
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☐ 24. Document ID: US 5703131 A

L8: Entry 24 of 52

File: USPT

Dec 30, 1997

US-PAT-NO: 5703131

DOCUMENT-IDENTIFIER: US 5703131 A

**\*\* See image for Certificate of Correction \*\***

TITLE: Method for the detoxification of mustard gas sulfur-containing quaternary ammonium ionene polymers and their use as microbicides

DATE-ISSUED: December 30, 1997

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Puckett; Wallace E.	Memphis	TN		
Zollinger; Mark L.	Memphis	TN		
Corral; Fernando Del	Memphis	TN		

US-CL-CURRENT: 514/642; 504/100, 504/160, 564/292, 564/295, 564/296, 588/200, 588/206

ABSTRACT:

A method for the detoxification of a mustard gas by reaction with a bis-tertiary diamine resulting in quaternary ammonium ionene polymers. Sulfur-containing quaternary ammonium ionene polymers which are useful as microbicides for controlling the growth of microorganisms in aqueous systems and on surfaces, as well as for inhibiting slime formation in aqueous systems and biocidal compositions contain effective amounts of the sulfur-containing quaternary ammonium ionene polymers.

3 Claims, 0 Drawing figures

Exemplary Claim Number: 1

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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NAME	Draw Desc	Image
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☐ 25. Document ID: US 5695652 A

L8: Entry 25 of 52

File: USPT

Dec 9, 1997

US-PAT-NO: 5695652

DOCUMENT-IDENTIFIER: US 5695652 A

TITLE: Methods for inhibiting the production of slime in aqueous systems

DATE-ISSUED: December 9, 1997

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Hernandez-Mena; Roy	The Woodlands	TX		
Sujdak; Richard J.	Yardley	PA		

US-CL-CURRENT: 210/764; 210/170, 210/747, 252/181, 424/729, 510/249, 514/25, 514/456

ABSTRACT:

Methods for inhibiting the attachment of microbes to surfaces in aqueous systems are disclosed. Tea extracts and/or tannins are added to aqueous systems, such as papermaking and cooling water systems, to inhibit microbial attachment to surfaces which cause slime formation problems

13 Claims, 0 Drawing figures

Exemplary Claim Number: 1

[Full](#) [Title](#) [Citation](#) [Front](#) [Review](#) [Classification](#) [Date](#) [Reference](#) [Sequences](#) [Attachments](#)

[Image](#) [Draw Desc](#) [Image](#)

☐ 26. Document ID: US 5681862 A

L8: Entry 26 of 52

File: USPT

Oct 28, 1997

US-PAT-NO: 5681862

DOCUMENT-IDENTIFIER: US 5681862 A

**\*\* See image for Certificate of Correction \*\***

TITLE: Ionene polymers as microbicides

DATE-ISSUED: October 28, 1997

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Hollis; C. George	Germantown	TN		
Jaquess; Percy A.	Tigrett	TN		

US-CL-CURRENT: 514/642; 514/837, 564/292

ABSTRACT:

A method for controlling the growth of at least one microorganism in an aqueous system susceptible to the growth of said microorganism and in recognized need of said control comprising the step of adding to said aqueous system an ionene polymer in an amount effective to inhibit the growth at least one microorganism selected from Campylobacter spp., Mycobacterium spp., Shigella spp., ribrio spp., Yersinia spp., Entamoeba spp., and poliovirus. The aqueous system is selected from potable water, sewage, and other nonmarine surface water. Methods for controlling the spread of the diseases cholera and polio are also disclosed.

7 Claims, 0 Drawing figures

Exemplary Claim Number: 1

[Full](#) [Title](#) [Citation](#) [Front](#) [Review](#) [Classification](#) [Date](#) [Reference](#) [Sequences](#) [Attachments](#)

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WEST Search History

DATE: Friday, June 27, 2003

<u>Set Name</u> side by side	<u>Query</u>	<u>Hit Count</u>	<u>Set Name</u> result set
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L8	L7 and treatment	52	L8
L7	l3 and microorganism	70	L7
L6	L5 and l3	1	L6
L5	microbial infection	3414	L5
L4	microbial	61885	L4
L3	ionene polymer	247	L3
<i>DB=PGPB; PLUR=YES; OP=ADJ</i>			
L2	US-20030021761\$.did.	1	L2
L1	US-20030031761\$.did.	1	L1

END OF SEARCH HISTORY